

UTC Project Information	
Project Title	Connected Vehicle Data Safety Applications
University	Texas A&M Transportation Institute
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Funding Source(s) and Amounts Provided (by each agency or organization)	Safe-D (Federal): \$250,000 3M match (Non-Federal): \$19,550
Total Project Cost	\$269,550
Agency ID or Contract Number	Grant No: 69A3551747115 Project: 05-081
Start and End Dates	10/1/2020 – 5/15/2022
Brief Description of Research Project	This project is an extension of an on-going Safe-D project (05-001 Connected Vehicle Data Safety Applications) which developed the computational and analytical foundation for this research. A cloud computing system of services and spatial algorithms were designed and developed to process the very large amounts of connected car (CC) data from Wejo to develop model variables, visualizations, and descriptive statistics. This research seeks to leverage those methods to explore the unanswered question of whether commercially available CC data derived from automotive OEMs can be used for roadway safety applications. The idea is that if leading crash risk indicators can be developed from CC data, then areas of safety concern can be detected before crashes occur, thereby saving lives, time, and resources. Some major automotive OEMs have developed tools to access and visualize the data generated by their CCs but are still lacking the ability to provide risk-based conclusions. This project will evaluate the effectiveness of commercially available CC data in roadway safety applications. We will comprehensively explore the relationships between driving behaviors and different severity crash events. An innovative big data analytic framework will be developed to analyze this emerging safety data
Describe Implementation of Research Outcomes (or why not implemented)	Final report and data outputs Higher education course lecture Workshop for students and researchers Summer internship
Place Any Photos Here	Undergraduate student involved in data analysis Submit journal article Presentation to TxDOT at Short Course

Impacts/Benefits of Implementation (actual, not anticipated)	Improved safety analyses from connected vehicle data by better understanding if observed driving behaviors are related to crash risk.
Web Links <ul style="list-style-type: none">• Reports• Project website	https://www.vtti.vt.edu/utc/safe-d/index.php/projects/connected-vehicle-data-safety-applications/